

Patent Claims:

1. Transmission lock for a superposition steering system of a motor vehicle,
for locking a rotatable transmission element associated with the transmission or interacting with the transmission with respect to its rotational movement, c h a r a c t e r i z e d in that a clamping element is used to positively lock, by way of a contour of an inner peripheral surface (inner contour) of an outer ring (2) and a contour of an outer peripheral surface (outer contour) of an inner ring (4), the inner ring (4) with the outer ring (2) in opposition to an elastic force, and that the clamping roller (7) is retained in an activation cage (5) that can be locked by way of an actuatable locking member.
2. Transmission lock as claimed in claim 1, c h a r a c t e r i z e d in that the clamping element (7), in the locked position, is urged via a double ramp (2a) of the outer ring (2) in opposition to an elastic force into a calotte (4a) of an inner ring (4), while the clamping element (7), in the unlocked position, is urged by an elastic force, preferably the elastic force of a locking washer, into a dome of the double ramp (2a) of the outer ring (2), and the clamping element (7) is spaced from the calottes (4a) of the inner ring (4) in the unlocked position.

3. Transmission lock as claimed in claim 1 or 2,
c h a r a c t e r i z e d in that the activation cage (5) is operatively connected to an activation disc (10), engaging into the accommodation of which is a locking member part (10a) associated with the locking member in a locking position, while it is withdrawn from the accommodation in an unlocked position.
4. Transmission lock as claimed in claim 3,
c h a r a c t e r i z e d in that the locking member or the locking member part (10a) associated with the locking member is pivoted essentially in parallel to the course of the longitudinal axis of the activation cage (5).
5. Transmission lock as claimed in claim 3 or 4,
c h a r a c t e r i z e d in that the locking member includes at least one hinged swivel arm (10), said swivel arm (10) including at least one engagement part (10a) engaging into the accommodation, at least in part, in order to bring about locking of the transmission.
6. Transmission lock as claimed in claim 5,
c h a r a c t e r i z e d in that the accommodation associated with the rotatable transmission element is an axial toothing (6a) interacting with the rotatable transmission element, and that the engagement part includes at least one engaging tooth (10a), which engages into the axial toothing, at least in part, in order to bring about locking of the transmission.

7. Transmission lock as claimed in any one of claims 1 to 6,
c h a r a c t e r i z e d in that the operable locking member can be actuated by way of an electromagnet (9) and locks the transmission in the deenergized condition of the electromagnet (9).
8. Transmission lock as claimed in any one of claims 1 to 7,
c h a r a c t e r i z e d in that the activation cage (5) is centered between the inner ring (4) and the outer ring (2) by way of an elastic means.
9. Transmission lock as claimed in claim 8,
c h a r a c t e r i z e d in that the elastic means centering the activation cage (5) is used to lock the transmission torque-responsively, because in the event of a torque of the transmission which is higher than a biasing moment of the elastic means, the clamping elements (7) will positively lock the inner ring (4) with the outer ring (2) in opposition to the elastic force by way of the contour of the inner peripheral surface of the outer ring (2) and the contour of the outer peripheral surface of the inner ring (4).
10. Transmission lock as claimed in any one of claims 1 to 9,
c h a r a c t e r i z e d in that a lock washer (12) is used as a means to generate the elastic force, said lock washer having at least one angled-off portion similar to a torsion spring, which comes into abutment in a groove of the activation cage (5), for the purpose

of positioning and avoiding a radial movement of the lock washer (12) in the activation cage (5).

11. Superposition steering system comprising a superposition transmission with a first input for actuation by the driver with the aid of a steering handle, a second input for a superposition actuator, and an exit to the steering transmission of the steering system, by means of which superposition transmission (depending on the driving situation) an output angle and, thus, a wheel angle of the steerable vehicle wheels is adjusted via both inputs, and comprising a locking unit by means of which the second input for the superposition actuator is locked in the event of system failure, and steerability of the vehicle by the driver is maintained,
c h a r a c t e r i z e d in that a transmission lock as claimed in any one of claims 1 to 10 is provided as a locking unit.